Description of Centers Selected for Funding
Fiscal 2003-2004

Acoustic Cooling Technology (U/U)
Developing novel miniature acoustic cooling devices without moving parts for application in computers and other electronics.

Advanced Imaging LADAR (USU)
Developing an airborne high-resolution, laser-based 3D color imaging platform for both military and civilian use.

Advanced Joining of Materials (BYU)
Developed new friction stir welding tools and materials capable of joining a wide range of metals, now being transferred to industry for aerospace, military and other manufacturing.

Advanced Structural Composites (BYU)
Developing manufacturing technology and commercial products based on the IsoTruss structures formed from lightweight composite materials.

Direct Machining And Control (BYU)
Developing method that allows a manufacturing machine controller to directly interpret CAD/CAM models, resulting in superior resolution for complex shapes.

Electronic Medical Education (U/U)
Authoring tools used to create medical education products, and selling them as a component based medical information management and processing system.

Global Knowledge Management (U/U)
Developing Knowledge Fusion and Dynamic Knowledge Refreshing software to enable next-generation data mining technology.

High-Speed Information Processing (USU)
Designing fast algorithms for Application Specific Integrated Circuits, which have value in most military and compact consumer electronic devices.

Homogeneous DNA Analysis (U/U)
Developing a simple and inexpensive method for genotyping DNA samples from patients or disease organisms right in a doctor's office.

In Situ Ozonator for Remediation (U/U)
Developing new equipment to integrate biological and chemical treatment processes for the detoxification and restoration of waterways contaminated by PCBs and other pollutants.

Petroleum Research (U/U)
Develops cost-effective solutions for liquid hydrocarbon production, handling and transportation. Optimizes petroleum recovery; process control and production automation in oil and gas fields.

Profitable Uses of Agricultural Byproducts (USU)
Develops cost-effective technologies to treat animal wastes, generating "biogas" that can be used to produce energy, and nutrients to be used in soil amendments.

CROMDI (U/U)
Developed new visualization technology that facilitates the rapid and accurate analysis of large quantities of complex and continuously changing data, with applications in medicine, finance etc.

Smart Sensors (USU)
Engaged in the development and commercialization of sensor-based products, such as an application for the detection of faults in aircraft wiring.

Titanium Boride Surface Hardening (U/U)
Developing harder, longer-lived components and devices for the aerospace, biomedical and industrial markets.